

**SUPPLY CHAIN MANAGEMENT PRACTICES AND
ORGANIZATIONAL PERFORMANCE OF LARGE
MANUFACTURING FIRMS IN NAIROBI, KENYA**

BY

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**A Management Research Project submitted in partial Fulfillment for the
Requirement of the Degree of Masters in Business Administration School of
Business University of Nairobi.**

November 2014

DECLARATION

I declare that this research project is a presentation of my original work and it has never been presented in any other university or college for any academic purposes.

Signature..... Date.....

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This research project has been submitted for examination with my approval as the supervisor.

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DEDICATION

This project is dedicated to my family members, for their support and encouragement throughout this project: my friends and colleagues, I appreciate them for their guidance and support: To God almighty, thank you.

ACKNOWLEDGEMENT

I wish to acknowledge my lectures at the University of Nairobi and especially my supervisor Mr. Nyamwange for his effective guidance and support throughout the project. I acknowledge the support given to me by my close friends. I also acknowledge all the organizations that co-operated with me during the collection of data. Thank you all and God Bless you.

ABSTRACT

This study was carried out to determine the effect of supply chain management practices on organizational performance among large manufacturing firms in Kenya. The study had two objectives, to establish supply chain management practices adopted by large manufacturing firms in Kenya, and to determine the effect of supply chain management practices on organizational performance of large manufacturing firms in Kenya. The research design involved a cross sectional survey of 46 large manufacturing companies in Nairobi, Kenya. Data was collected using a questionnaire that was administered through “drop and pick” method. Mean and standard deviation were used to analyze objective one whereas regression analysis was used to analyze the effect of supply chain management practices and organizational performance among large manufacturing firms in Kenya. The findings are presented in tables. It is clear that there is a significant relationship between supply chain management practices and organizational performance explained by the seven independent variables strategic supplier partnership, customer relationship, level of information sharing, quality of information, extent of outsourcing, lean practices and postponement. The study only focused on the large manufacturing companies in Nairobi. Therefore, the researcher recommends further research on other firms that are not located in Nairobi and are not in the manufacturing industry. The researcher has also recommended that future research to expand on the domain of SCM practices by considering additional dimensions and also seek to utilize multiple respondents to enhance research findings.

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LIST OF ABBREVIATIONS AND ACRONYMS

CRM: Customer Relationship Management

GDP: Gross Domestic Product

KAM: Kenya Association of Manufactures

KIRDI: Directory of Manufacturing Industries

SCM: Supply Chain Management

UNIDO: United Nation Industrial Development Organization.

CHAPTER ONE :INTRODUCTION

1.1 Background of the study

Over the years the nature of competition has changed to the extent that companies no longer compete against each other on the basis of quality as traditionally practiced in the 80`s (Faweet, 2007). However the new source of business competition link their operation with their supply chain partners; suppliers, distributors, wholesalers, retailers and end customers (Petrovic, 2007). Being able to create business relationships with customers, suppliers and other strategic partners anchored on trust and long term commitment then becomes a crucial competitive parameter (Mattson, 2002). For this and other factors like shorter product lifecycle and customer expectation, businesses have had to invest and re-focus greater attention on relationship with customers and suppliers. Consequently an organization supply chain has become a strategic agenda driving decision making at senior management level.

In the 1990`s competition intensified and markets became global resulting to challenges associated with getting a product and service to the right place at the right time and at the lowest cost. Organisations began to realize that it is not enough to improve efficiencies within an organization but their whole supply chain has to be made competitive. The understanding and practicing of supply chain management practices has become an essential for staying competitive in the global market and for enhancing profitability (Storey, 2005).

Effective supply chain management practices are important to build and sustain competition in products and services of the firm. Gunaseken and Ngai (2004) state that the performance of the supply chain is influenced by managing and integrating key element of information into their supply chain. To achieve effective supply chain integration the firms need to implement information technology which will see them gain competitive advantage through numerous supply chain dimensions such as quality, cost, flexibility, delivery and profit.

1.1.1 Supply Chain Management Practices

SCM practices has been defined as a set of activities undertaken by an organization to promote effective management of its supply chain” (Li, 2006).He proposed SCM practices as a multi-dimensional construct that includes both upstream and downstream sides of the supply chain. Donlon (1996) considered outsourcing, supplier partnership, information sharing, cycle time compression, and continuous process flow, as SCM practices. Tan (1998) used quality, purchasing, and customer relations to represent SCM practices, in their empirical study.

Alvarado and Kotzab (2001) focused on inter-organizational system use, core competencies, and elimination of excess inventory through postponement, as SCM practices. Using factor analysis, Tan et al. (2002) identified: supply chain integration, information sharing, customer service management, geographic proximity, and JIT capability, as the key aspects of SCM practice. Lee (2004) in his case study based research identified five practices at the supply chain level that are a key to creating supply chain responsiveness. They include: outsourcing, strategic supplier partnerships, customer relationships, information sharing, and product modularity.

Chen and Paulraj (2004) used long-term relationship, cross-functional teams, supplier base reduction, and supplier involvement. Min and Mentzer (2004) identified long-term relationship, information sharing, vision and goals, risk and award sharing, cooperation, process integration, and supply chain leadership underlying the concept of SCM. Li et al. (2006) identified strategic supplier partnership, customer relationship, and information sharing as key SCM practices. This study adopts the same practices (these are: strategic supplier partnership, customer relationship, and information sharing) as sub-constructs for the SCM practices construct. Li et al. (2005) developed a valid and reliable instrument to measure SCM practices. The same instrument has been adopted in this study. Thus the literature depicts SCM practices from different perspectives with a common goal of improving organizational performance.

1.1.2 Organizational Performance

Performance in organizations takes many forms depending on whom and what the measurement is meant for. Different stakeholders require different performance indicators to enable them make informed decisions (Manyuru, 2005). According to Richard et al. (2009) organizational performance encompasses three specific areas of firm outcomes: (a) financial performance (profits, return on assets, return on investment, etc.); (b) product market performance (sales, market share, etc.); and (c) shareholder return (total shareholder return, economic value added, etc.) Mahapatro, (2009) defines Organizational Performance as the ability of an organization to fulfill its mission through sound management, strong governance and a persistent rededication to achieving results. Effective nonprofits are mission-driven, adaptable, customer-focused, entrepreneurial, outcomes oriented and sustainable.

Thompson et al, (2007), notes that using financial measures alone overlooks the fact that what enables a company to achieve or deliver better financial results from its operations is the achievement of strategic objectives that improve its competitiveness and market strength. Non financial measures include innovativeness (Goldsmith and Cluterbuck, 1998) and market standing (Saunders and Wong, 1995, Hooley and Lynch, 1995). Performance is therefore measured by both financial and non-financial measures.

Kaplan and Morton (1992) listed various methods to measure the overall organizational performance which are; accounting measures (profitability measures, growth measures, leverage, liquidity and cash flow measures), operational performance (market share, changes in intangible assets such as patents or human resources, customer satisfaction and stakeholder performance market based measures (return on shareholder performance), market based measures (return on shareholder, market value added, holding period returns), survival measures (takes time horizons of five years and less) and economic value measures (residual income, economics value added and cash flow return on investment)

1.1.3 Supply Chain Management Practices and Organizational Performance

Previous studies suggest that effective SCM practices have a direct impact on the overall financial and marketing performance of an organization (Shin et al. 2000; Prasad and Tata 2000). Indeed, SCM practices is expected to increase an organization's market share, return on investment and improve overall competitive positions. For instance, Tan et al. (1998) asserted that customer relations and purchasing practices impact the effectiveness of SCM strategy and lead to financial and market performance. Froehlich and Westbrook (2001) on the other hand suggested that companies with broader supply chain integrations with suppliers and customers showed the largest performance improvement in business achievements.

SCM practices impact not only overall organizational performance, but also competitive advantage of an organization. They are expected to improve an organization's competitive advantage through price/cost, quality, delivery dependability, time to market, and product innovation. Prior studies have indicated that the various components of SCM practices (such as strategic supplier partnership) have an impact on various aspects of competitive advantage (such as price/cost). For example, strategic supplier partnership can improve supplier performance, reduce time to market (Hanfield, 1997), and increase the level of customer responsiveness and satisfaction (power, 2001).

1.1.4 Manufacturing Firms in Kenya

The manufacturing industry is an important sector in Kenya as it makes a substantial contribution to the country's economic development. The industry is one of the key economic pillar in the vision 2030 geared to make the nation a middle level income country by the year 2030. According to KAM, there are over 700 established multi-sector manufacturing firms in Kenya where 455 are located in Nairobi. The firms differ in terms of products that they are engaged in and in size as determined by the number of employees. The manufacturing industry has the potential to generate foreign exchange earnings through exports to diversify the country's economy and create employment.

Manufacturing is an important sector in Kenya and it makes a substantial contribution to the country's economic development. It has the potential to generate foreign exchange earnings through exports and diversify the country's economy. This sector has grown over time both in terms of its contribution to the country's gross domestic product and employment. The average size of this sector for tropical Africa is 8 per cent. Despite the importance and size of this sector in Kenya, it is still very small when compared to that of the industrialized nations United Nations Industrial Development Organization (UNIDO, 1997).

Globalization and intense competition of supply chains has forced manufacturing firms to look for better manufacturing methods to remain competitive. However the industry production has also slowed down owing to the rise in inflation, high cost of energy and the dumping of cheap imports. Rather than competing with lower prices, the application of supply chain management practices will go a long way to ensure that large firms in the manufacturing sector gain competitive advantage which will consequently lead to organization performance.

1.2 Problem Statement

Kenya is the most industrially developed country in East Africa, but it has not yet produced results to match its potential (UNIDO, 2004). The manufacturing industry has to put in more effort to ensure that it performs better and contributes more to the country's GDP. For the manufacturing companies, supply chain management practices play a major role on their performance given the nature of competition in the environment that they operate in both locally and internationally. Therefore a study on the level at which this sector has adopted the various supply chain management which have lately proved to be a source of competitive advantage on organizational performance is important.

The concept of SCM has received increasing attention from academicians, consultants and business managers alike. Many organizations have begun to recognize that SCM is

the key to building sustainable competitive edge. Despite this increased attention, the literature has not been able to offer much way of guidance to help the practice of SCM (Perona, 2004).

Much of the current theoretical/Empirical research in SCM focuses on only downstream or upstream side of the supply chain or certain aspects/perspectives of SCM. Internationally studies such as those of (Clark and Lee, 2000) focus on the downstream linkages between manufactures and retailers. A few recent studies have considered both upstream and downstream simultaneously (Tan, 2004) carried out a study that explored the relationship between supplier management practices, customer relationship practices and organization performance. Frohlich and Westbrook (2001) investigated the effects of supplier-customer integration on organization performance among many others. These studies are representative of efforts to address the diverse but interesting aspects of SCM practices. However the lack of an integrated framework incorporating all the activities both upstream and downstream sides of the supply chain and linking such activities to both competitive advantage and organization performance does not help much in coming up with a framework of implementing previous results on SCM. This study aims at coming up with a tested framework identifying the relationship among SCM practices, competitive advantage and organization performance

Locally studies have been carried out that have focused on specific aspects of SCM Bosire (2011) researched on the Impact of logistics outsourcing on lead time and customer service among supermarkets in Nairobi. He found out that outsourcing of logistics services in supermarkets has a direct effect with the lead times of product delivery and that among those supermarkets that have outsourced procurement of products from the suppliers; time taken to deliver the same products to their warehouses has tremendously reduced.

Kamau (2011) conducted a study on buyer supplier relationship and organization performance where she found out that there is a clear relationship between the two variables. Mose (2012) conducted a study on the adoption of E- procurement in large

manufacturing firms. He found out that many manufacturing firms have adopted various e-procurement practices. This is an indication that there is lack of study carried out locally to bring out an understanding of the comprehensive set of SCM practices and how they can enable an organization improve its performance and gain competitive advantage. This study therefore aimed at bridging this gap and seeking answers to research questions which were, What are supply chain management practices adopted by manufacturing firms in Kenya and what the effect the supply chain management practices adopted have on the performance of large manufacturing firms in Nairobi, Kenya.

1.3 Research objectives

The study had two main objectives that have been derived from the research questions. This are:

1. To establish supply chain management practices adopted by large manufacturing firms in Kenya
2. To determine the effect of Supply Chain Management practices on the performance of large manufacturing firms in Kenya

1.4 Value of study

The study will help the manufacturing firms in Kenya to establish the effect supply chain management practices on their organizational performance.

Other non-manufacturing institutions will also benefit from the findings of this study since it will shed more light on the effect of supply chain management practices on organizational performance

The findings of this study will be used as a reference point by other researchers for further research on the same field. They can also use the findings as a secondary source of information.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter focuses on the literature review to be conducted by the researcher. It includes a review of the various studies that have been conducted by other researchers on supply chain management practices. Among the areas to be reviewed include: constructs on supply chain management practices; buyer – supply chain management practices variables; organizational performance. The chapter will also provide a conceptual framework to show the relationship between the dependent and independent variables.

2.2 Supply Chain Management Practices

The concept of supply chain management was introduced in the 1980's and it was developed from traditional logistics management. Earlier companies were considered as single entities with little connection with other companies that were considered as competitors. Therefore the company focuses their decision making on internal processes and flows. This processes and flows were optimized without taking the other parts of the company into consideration. As a result of this, the cost of optimization was either pushed upstream or downstream therefore not affecting the total cost of production. SCM is focusing on both internal and external flow of processes and flows and like mentioned earlier, competition today is between supply chains rather than individual organizations. (Christopher, 2005) defines SCM as a strategic view of materials and distribution management that shows the benefits to the individual from the boost of performance of the supply chain as a whole through the lens of the business processes across functional and corporate borders

SCM practices' is defined as "the set of activities undertaken by an organization to promote effective management of its supply chain" (Li, 2006). He proposed SCM practices as a multi-dimensional construct that includes both upstream and downstream sides of the supply chain. Donlon (1996) considered outsourcing, supplier partnership, information sharing, cycle time compression, and continuous process flow, as SCM practices. Tan, 1998) used quality, purchasing, and customer relations to represent SCM practices, in their empirical study.

Alvarado and Kotzab (2001) focused on inter-organizational system use, core competencies, and elimination of excess inventory through postponement, as SCM practices. Using factor analysis, Tan et al. (2002) identified: supply chain integration, information sharing, customer service management, geographic proximity, and JIT capability, as the key aspects of SCM practice. Lee (2004) in his case study based research identified five practices at the supply chain level that are a key to creating supply chain responsiveness. They are: outsourcing, strategic supplier partnerships, customer relationships, information sharing, and product modularity.

Chen and Paulraj (2004) used long-term relationship, cross-functional teams, supplier base reduction, and supplier involvement. Min and Mentzer (2004) identified long-term relationship, information sharing, vision and goals, risk and award sharing, cooperation, process integration, and supply chain leadership underlying the concept of SCM. Li et al. (2005, 2006) identified strategic supplier partnership, customer relationship, and information sharing as key SCM practices.

Table 2.1 Supply Chain Management Practices

Sub-construct	Definition
Strategic supplier partnership	The long-term relationship between the organization and its suppliers. It is designed to leverage the strategic and operational capabilities of individual participating organizations to help them achieve significant ongoing Benefits
Customer relationship	The entire array of practices that are employed for the purpose of managing customer complaints, building long-term relationships with customers, and improving customer satisfaction
Level of information sharing	The extent to which critical and proprietary information is communicated to one's supply chain partner.
Quality of information sharing	Refers to the accuracy, timeliness, adequacy, and credibility of information exchanged
Outsourcing	Outsourcing has been defined as the transfer of the production or transfer of goods and services that have been carried out internally to an external provider (Domberger, 1998).
Lean practices	It is the process of removing all of the wasted time and resources in the production process. Lean can be considered a philosophy, a work culture, a technique, a management concept, a value, a methodology or an ethos (Mark, Wilson and Ram, 2009)
Postponement	The practice of moving forward one or more operations or activities (making, sourcing and delivering) to a much later point in the supply chain.

Source, Author

A more detailed discussion of the construct follows

2.2.1 Strategic Supply Chain Relationship

Is defined as the long term relationship between the organization and its suppliers. It is designed to leverage the strategic and operational capabilities of individual participating organizations to help them achieve significant ongoing benefits (Stuart, 2004). A strategic partnership emphasizes direct, long-term association and encourages mutual planning and problem solving efforts. Such strategic partnerships are entered into to promote shared benefits among the parties and ongoing participation in one or more key strategic areas such as technology, products, and markets (Yoshino, 1995). Strategic partnerships with suppliers enable organizations to work more effectively with a few important suppliers who are willing to share responsibility for the success of the products. Suppliers participating early in the product-design process can offer more cost effective design choices, help select the best components and technologies, and help in design assessment (Wisner, 2002). Strategically aligned organizations can work closely together and eliminate wasteful time and effort. An effective supplier partnership can be a critical component of a leading edge supply chain.

2.2.2 Customer Relationship

Comprises the entire array of practices that are employed for the purpose of managing customer complaints, building long-term relationships with customers, and improving customer satisfaction (Noble,1997) and (Tan, 1998) Consider customer relationship management as an important component of SCM practices. As pointed out by Day (2000), committed relationships are the most sustainable advantage because of their inherent barriers to competition. The growth of mass customization and personalized service is leading to an era in which relationship management with customers is becoming crucial for corporate survival (Wines, 1996). Good relationships with supply chain members, including customers, are needed for successful implementation of SCM programs. Close customer relationship allows an organization to differentiate its product from competitors, sustain customer loyalty, and dramatically extend the value it provides to its customers

2.2.3 Level of Information Sharing

Information sharing has two aspects: quantity and quality. Both aspects are important for the practices of SCM and have been treated as independent constructs in the past SCM studies (Romano, 2001). Level (quantity aspect) of information sharing refers to the extent to which critical and proprietary information is communicated to one's supply chain partner (Monczka, 1998). Shared information can vary from strategic to tactical in nature and from information about logistics activities to general market and customer information (Mentzer, 2000). Many researchers have suggested that the key to the seamless supply chain is making available undistorted and up-to-date marketing data at every node within the supply chain (Child House and Towill, 2003). By taking the data available and sharing it with other parties within the supply chain, information can be used as a source of competitive advantage (Jones, 1997).

Lalonde (1998) considers sharing of information as one of five building blocks that characterize a solid supply chain relationship. According to (Stein and Sweat, 1998) supply chain partners who exchange information regularly are able to work as a single entity. Together, they can understand the needs of the end customer better and hence can respond to market change quicker. Moreover, (Tompkins and Ang, 1999) consider the effective use of relevant and timely information by all functional elements within the supply chain as a key competitive and distinguishing factor. The empirical findings of (Child house and Towill,2003) reveal that simplified material flow, including streamlining and making highly visible all information flow throughout the chain, is the key to an integrated and effective supply chain.

2.2.4 Quality of Information Sharing

Quality of information sharing includes such aspects as the accuracy, timeliness, adequacy, and credibility of information exchanged (Moberg, 2002). While information sharing is important, the significance of its impact on SCM depends on what information is shared, when and how it is shared, and with whom (Holmberg, 2000). Literature is replete with example of the dysfunctional effects of inaccurate/delayed information, as

information moves along the supply chain (Lee, 1997). Divergent interests and opportunistic behavior of supply chain partners, and informational asymmetries across supply chain affect the quality of information (Feldmann, 2003). It has been suggested that organizations will deliberately distort information that can potentially reach not only their competitors, but also their own suppliers and customers (Mason, 1997). It appears that there is a built in reluctance within organizations to give away more than minimal information since information disclosure is perceived as a loss of power. Given these predispositions, ensuring the quality of the shared information becomes a critical aspect of effective SCM (Feldmann, 2003). Organizations need to view their information as a strategic asset and ensure that it flows with minimum delay and distortion.

2.2.5 Lean practices

According to Lean Enterprise Institute (2009) the term lean was coined by Krafcik in the late 80`s, even though the philosophy came to the Western world`s attention in the early 80`s as a result of competition from Japan automobile industry which offered low prices and quality products. To precisely define lean is hard and it is likely that every company exercising lean will follow their own unique course (Lewis, 2000). It is the process of removing all of the wasted time and resources in the production process. Lean can be considered a philosophy, a work culture, a technique, a management concept, a value, a methodology or an ethos (Mark, Wilson and Ram, 2009). Today, lean is evolving into a management approach that improves all the processes at each level of an organization (Womack *et al.*, 1990; Liker, 1998).

According to Bhasin and Butcher (2006) some of the common lean procurement methodologies are; Kaizen, Kanban systems and Supplier development. A long term philosophy, processes, people and right culture are essential to convert an organization into a lean enterprise (Liker, 2004; Henderson *et al.*, 1999). Long term relationships with suppliers are important elements of lean supply (Handfield, 1993). According to Liker (1996); Lathin, (2001); Ferch, *et al.*, (1998) today`s demand driven supply chains require lean procurement methods whose goals are: to eliminate waste in all procurement cycles, prevent shortages, reduce inventory investment, reduce procurement lead time and cost,

increase inventory turnover and ensure customers satisfaction. These methods ensure greater efficiency and standardization of procedures

2.2.6 Postponement

Postponement is defined as the practice of moving forward one or more operations or activities (making, sourcing and delivering) to a much later point in the supply chain. Two primary considerations in developing a postponement strategy are: determining how many steps to postpone, and determining which steps to postpone (Beamon, 1998). Postponement allows an organization to be flexible in developing different versions of the product in order to meet changing customer needs, and to differentiate a product or to modify a demand function (Waller, 2006). Keeping materials undifferentiated for as long as possible will increase an organization's flexibility in responding to changes in customer demand. In addition, an organization can reduce supply chain cost by keeping undifferentiated inventories (Van, 1995). Postponement needs to match the type of products, market demands of a company, and structure or constraints within the manufacturing and logistics system. In general, the adoption of postponement maybe appropriate in the following conditions: innovative products ; products with high monetary density , high specialization and wide range; markets characterized by long delivery time, low delivery frequency and high demand uncertainty; and manufacturing or logistics systems with small economies of scales and no need for special knowledge.

2.3 Organizational Performance

Organizational performance refers to how well an organization achieves its market-oriented goals as well as its financial goals (Yamin, 1999). The short-term objectives of SCM are primarily to increase productivity and reduce inventory and cycle time, while long-term objectives are to increase market share and profits for all members of the supply chain (Tan, 1998). Financial metrics have served as a tool for comparing organizations and evaluating an organization's behavior over time (Holmberg, 2000). Any organizational initiative, including supply chain management, should ultimately lead to enhanced organizational performance. A number of prior studies have measured organizational performance using both financial and market criteria, including return on

investment (ROI), market share, profit margin on sales, the growth of ROI, the growth of sales, the growth of market share, and overall competitive position represented by constructs like, Price/Cost. “The ability of an organization to compete against major competitors based on low price” (Li, 2006). Quality. “The ability of an organization to offer product quality and performance that creates higher value for customers” (Koufteros, 1995), delivery dependability. The ability of an organization to provide on time the type and volume of product required by customer(s) (Li et al, 2006), Product Innovation. The ability of an organization to introduce new products and features in the market place (Koufteros, 1995) and Time to Market. “The ability of an organization to introduce new products faster than major competitors” (Li et al., 2006).

2.4 Supply Chain Management Practices and Organization Performance

SCM practices impact not only overall organizational performance, but also competitive advantage of an organization. They are expected to improve an organization’s competitive advantage through price/cost, quality, delivery dependability, time to market, and product innovation. Prior studies have indicated that the various components of SCM practices (such as strategic supplier partnership) have an impact on various aspects of competitive advantage (such as price/cost). For example, strategic supplier partnership can improve supplier performance, reduce time to market (Hanfield, 1997), and increase the level of customer responsiveness and satisfaction (power, 2001). Information sharing leads to high levels of supply chain integration by enabling organizations to make dependable delivery and introduce products to the market quickly. Information sharing and information quality contribute positively to customer satisfaction and partnership quality (lee,1999).

Postponement strategy not only increases the flexibility in the supply chain, but also balances global efficiency and customer responsiveness (Van, 1999). Firms with high levels of SCM practices will have high levels of competitive advantage. Having a competitive advantage generally suggests that an organization can have one or more of the following capabilities when compared to its competitors: lower prices, higher quality,

higher dependability, and shorter delivery time. These capabilities will, in turn, enhance the organization's overall performance (Mentzer, 2000). Competitive advantage can lead to high levels of economic performance, customer satisfaction and loyalty, and relationship effectiveness. Brands with higher consumer loyalty face less competitive switching in their target segments thereby increasing sales and profitability (Moran, 2001).

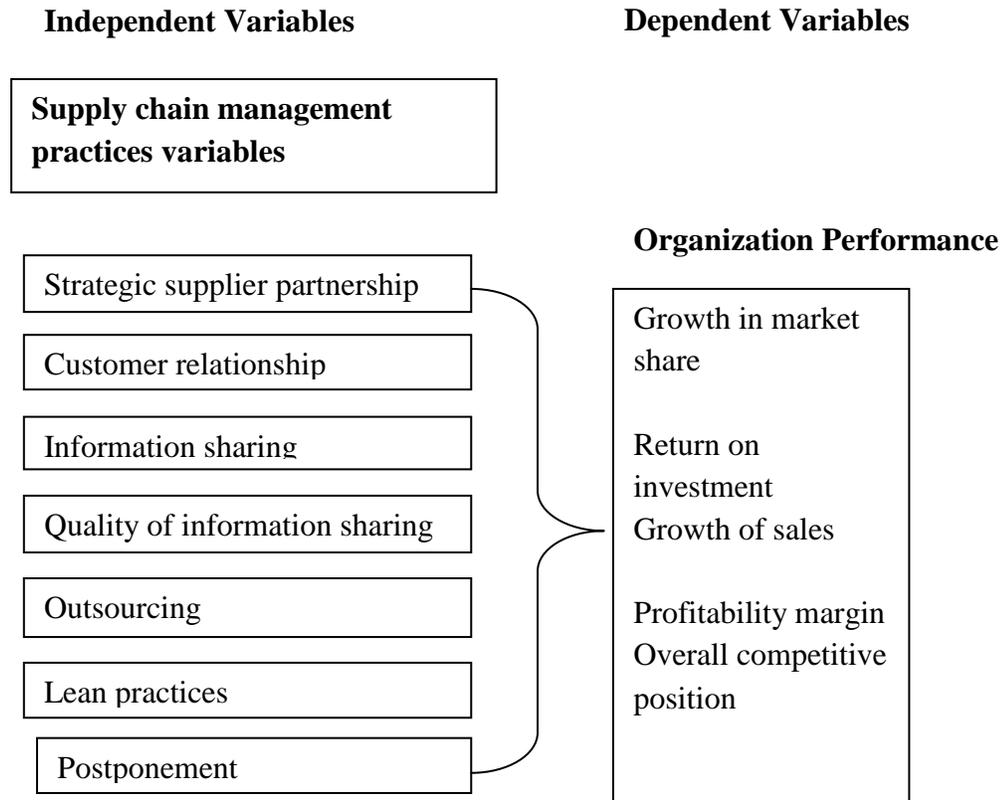
2.5 Summary of the Literature Review

From the literature review it is clear that scholars have different views on the supply chain management practices that are key to organization performance. They however seem to agree on the main practices which are strategic supplier relationship, customer relationship, information sharing, information quality and out sourcing. It is an indication that different organizations rank these practices differently whereby one supply chain management practice can be widely adopted by an organization but minimally adopted or even not at all used by another organization.

It is also clear that there is a positive correlation between supply chain management practices and organization performance as they enable organizations to have competitive advantage represented by factors like low price /cost, demand dependability, product innovation, short time to market among many others thanks to these practices.

2.6 Conceptual Framework

Figure 2.1 Conceptual Model



Source: Author (2014)

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research design and methodology that was used. It entails the study design, the population, the data collection techniques and the data analysis procedure.

3.2 Research Design

This research design used was a cross sectional survey of the large manufacturing companies operating in Kenya. The study adopted a descriptive approach in trying to focus on large manufacturing firms in Nairobi. According to Emory (1995), a survey was feasible when the population is small and variable and hence the researchers were able to cover all the elements of the population. Therefore a survey is considered to be more efficient and economical.

3.3 Population

The population of the study in this research consisted of all the large scale manufacturing companies that are based in Nairobi. According to Kenya Association of Manufacturers (KAM) directory, June, 2013, there are 455 large scale manufacturing firms in Nairobi. This area was chosen because it is where most of the large scale manufacturing firms in various sectors are concentrated thereby giving a big population where a proportionate sample was to be derived.

3.4 Sampling

Stratified random sampling method was applied to come up with the sample size, since the population in different large manufacturing firms does not represent a homogeneous group, therefore the method is generally applied in order to obtain a representative sample. This according to Kothari (2004) will ensure that each manufacturing subsector is represented. According to Mugenda and Mugenda (2003) observed that where a study

is dealing with a heterogeneous population, a minimum target of 10% is required. The study therefore will involve 46 large manufacturing firms in Nairobi.

Table 3.1: Sampling frame

Sector	No of firms	%	Respondents
Building	6	1.3	1
Food and Beverages	100	22	10
Chemicals	62	13.6	6
Energy	42	9.2	4
Plastic and Rubber	54	11.9	5
Textile and Apparels	38	8.4	4
Wood products	22	4.8	2
Pharmaceuticals	20	4.4	2
Metal and Allied	38	8.4	4
Leather products	8	1.8	1
Motor vehicle	17	3.7	2
Paper	48	10.5	5
TOTAL	455	100	46

Source author (2014)

3.5 Data Collection

The study used primary data that was collected through a self-administered questionnaire that consisted of both open and closed ended questions that were designed to elicit specific responses for qualitative and quantitative analysis respectively. The questionnaires had three sections. The first section contained questions on the general data of the manufacturing firms, the second part; on the other hand answered questions on objective one while the third will answered questions on objective two. The questionnaires were administered by drop and pick later method. The study picked head of supply chain/procurement, head of finance and head of information technology department or their equivalents each of the manufacturing firms that took part in the study.

3.6 Data Analysis

Before processing the responses, the completed questionnaires were edited for completeness and consistency. Objective one which is to establish the supply chain practices adopted by the firms was analyzed using descriptive statistics where mean and standard deviation were used. Inferential statistics was used to analyze objective two. Specifically a dimension level analysis will be performed using regression analysis which was instrumental in indicating whether the independent variables-SCM practices significantly predict the dependent variable organization performance.

Regression model- $Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + e$ where Y = Organization performance; a= the y intercept when x is zero; b1, b2, b3, b4, b5, b6, b7 are regression coefficients of the following variables respectively; x1- strategic supplier management ; x2- customer relationship management ; x3-information sharing ; x4-quality of information sharing ; x5- outsourcing ; x6- lean practices ; x7- postponement.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

This study was carried out to establish the effect of supply chain management practices on organizational performance among large manufacturing firms in Kenya. Data was collected from supply chain managers, assistant supply chain managers, supply chain officers, finance managers and information technology managers. The findings are presented next.

4.2 General Information

A total of 46 questionnaires were distributed to large manufacturing firms in Nairobi. Out of the 46 questionnaires, 27 were returned to the researcher. This represents a response rate of 63%. This percentage was considered sufficient for this study. The 35% who never returned the questionnaires cited busy schedules as the main reason for lacking time to fill them.

The first part of the questionnaire contained general information regarding the organization and the respondent. The areas sited in this part were: duration the company has been in operation, the position of the respondent in the organization, the duration the respondent has worked in that position and the gender of the respondent.

4.2.1 Position of the Respondent

The respondents were asked to indicate the positions they held in the respective companies and the duration they had served in those positions. They were provided with options to choose from. 30% of the respondents who participated in the study are supply chain managers while 35 were assistant supply chain managers. This confirms that they are well conversant with supply chain management practices and their effect on organizational performance. It was also evident as shown in table 4.3 that 33% of the respondents have served in their respective positions for less than five years. The supply chain concept is relatively new in Kenya and this probably explains the reason why most of the respondents had served as supply chain managers for a short period of time.

4.3 Extent to which Manufacturing Firms in Kenya have Adopted Supply Chain Management Practices

The study sought to establish the extent to which large manufacturing firms in Nairobi have adopted supply chain management practices. A number of questions were fronted to the respondents who gave their responses on a scale of 1-5 where 1 represents to a very small extent and 5 very large extent. Table 4.3 shows the mean and standard deviation of factors that were used by the researcher to show the extent to which large manufacturing firms in Nairobi had adopted the various supply chain management practices. A mean of 3-5, shows that the factor in question has been adopted by the responding organizations to a large extent. A mean of 1-2, shows the factor in question has been adopted by the responding organizations to a small extent.

Table 4.1 below shows the analysis of the responses where the mean and standard deviation indicate the extent to which various supply chain management practices have been adopted

Table 4.1: Extent of adoption of supply chain management practices

SUPPLY CHAIN MANAGEMENT PRACTICES	MEAN	STD DEV
Strategic supplier partnership		
Including key suppliers in planning and goal setting activities	4.185	0.611
Quality considered as a number one criterion in selection of suppliers	4.148	0.590
Actively involving key suppliers in new product development process	3.83	0.88
Continuous improvement programs that include key suppliers	3.667	0.943
Helping suppliers improve their product quality	3.444	0.629
Customer relationship		
Periodically evaluate the importance of relationship with customers	4.609	0.570
Facilitating customer`s ability to seek assistance	4.609	0.650
Frequently determining future customer expectations	4.522	0.650
Frequently interacting with customers to set reliability, responsiveness and other standards	4.391	0.706

Level of information sharing		
Supply chain partners share business knowledge of core business	3.833	0.850
Our supply chain partners share core information with us	3.704	0.808
Exchange of information between supply chain partners that help establishment of business	3.625	0.904
Supply chain partners keep us fully informed about issues affecting our business	3.519	0.874
Supply chain partners share proprietary information	3.444	0.875
Informing supply chain partners in advance of changing needs	3.333	0.777
Quality of information sharing		
Accurate exchange of information between supply chain partners	4.5	0.645
Reliable information exchanged among supply chain partners	4.417	0.820
Timely information sharing among supply chain partners	4.370	0.618
Complete information exchanged between supply chain partners	4.333	0.687
Adequate information exchanged among supply chain partners	4.208	0.815
Extent of outsourcing		
Firms outsources logistics	3.708	1.109
Firms outsources pre-sales customer services	2.542	1.190
Firm outsources after-sales customer services	2.333	1.312
Firm outsources information systems	2.222	0.875
Firm outsources manufacturing	2	0.707
Lean practices		
Firms delaying, downsizing and outsourcing	2.459	1.258
Firm does not rely on inspecting products procured	2	1.040
Firm continually improve their own performance with small incremental lean procurement improvements (Kaizen)	2.444	0.994
Firms buy products in small batches only when they are needed	1.833	0.745
Firm outsources product design	1.583	0.759
Postponement		
Delay of final product assembly activities until customer orders have actually been received	1.148148	0.44752
Products are designed for modular assembly	1.125	0.330
Delay of final product assembly activities until customer orders have actually been received	1.083	0.276

From the table above it comes out clearly that large manufacturing firms in Nairobi have adopted various supply chain management practices though at different extents. For instance customer relationship is a practice that has been highly adopted because all the factors under it fall under 4 which means it is adopted by a large extent as per the likert scale. This could be as a result of the stiff competition within the industry due to the fact that most of the organizations are offering the same or close goods and services therefore adopting this practice so as to ensure increased market share and customer retention.

Information quality and strategic supplier management are also practices that have been adopted by the firms under the study which could be attributed to the fact that firms have realized that supply chain compete and not organizations therefore involving their suppliers and other partners in the running of the organization. Information quality seems to be taken seriously by these organizations because they could have realized that information plays a very key role in the success of organizations and the supply chain as a whole. It is the blood of the supply chain such that without it the chain is bound to fail. Lean practices, outsourcing and postponement are practices that have been adopted to a small extent because from the results in table 4.5 we see that there mean lie between 1 and 2. This could be as a result of these firms not being in a position to implement them or they could not have realized the enormous positive impact that these practices can have on their performance. Postponement is the least adopted practice which could be attributed to the fact that maybe the firms believe that for example they cannot delay final product assembly until customers make order due to fear of uncertainties that can lead to them losing their customers to competitors.

The findings from this table are partly in agreement with the literature review that was conducted. According to Donlon (2006), strategic supplier partnership, information sharing and outsourcing as the main supply chain management practices. This seems to be the case for large manufacturing firms in Nairobi save for outsourcing that is adopted to a small extent disqualifying it as a main supply chain practice in the manufacturing industry.

Li et al identified strategic supplier partnership, customer relationship and information sharing as key supply chain management practices. This has proven to be the same case for large manufacturing firms in Nairobi as the results from the table above indicate that all these practices have been adapted to a large extent.

4.4 Effect of supply chain management on the performance of large manufacturing firms in Nairobi, Kenya

Respondents were asked to indicate whether the various supply chain management practices adopted had an impact on the various aspects of organizational performance.

4.5 Regression Analysis

The regression analysis is concerned with the distribution of the average value of one random variable as the other variables which need not be random are allowed to take different values. A multivariate regression model was applied. The regression model specifically connects the average values of y for various values of the x-variables. A regression equation is in no way a mathematical linking two variables but serves as a pointer to questions to be answered. Basically, the regression analysis is used in two distinct including being a means of considering data taking into account any other relevant variables by adjustment of the random variable and generating mathematical forms to be used to predict the random variable from the other (independent) variables.

The regression model was as follows:

The model specification is as follows

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \varepsilon$$

Where;

β_0 = constant

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8$ = coefficient

X_1 = Strategic supplier partnership

X_2 = Customer relationship

X_3 = Information sharing

X_4 = Information quality

X_5 = Outsourcing

X₆= Lean practices

X₇= Postponement

ε= error term

Table 4.2 Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	4.231	1.764		1.845	.145
Strategic supplier partnership	.745	.2543	1.105	1.002	.043
Customer relationship	.578	.0786	.114	.132	.023
Information sharing	.864	.1298	-.215	-.276	.039
Information quality	.357	.1564	.123	.162	.004
Outsourcing	.478	.3235	-.634	-.273	.453
Lean practices	.564	.2333	.124	.283	.063
Postponement	.467	.1172	-.231	-.299	.083

a. Dependent Variable: Organizational Performance

Source: Research data, (2014)

The established multiple linear regression equation becomes:

$$Y = 4.231 + 0.745X_1 + 0.578X_2 + 0.864X_3 + 0.357X_4 + 0.478X_5 + 0.564X_6 + 0.467X_7$$

Where

β₀= 4.231, shows that if the level strategic supplier partnership, customer relationship, information sharing, information quality, outsourcing, lean practices, postponement, organizational performance would be 4.231

organizational performance

Where: x₁=strategic supplier partnership x₂=customer relationship x₃=information sharing x₄=information quality x₅=outsourcing x₆=lean practices and x₇= postponement.

Using a significance level of 5% any value having a significant value greater than 5% is

not statistically significant. These are x5=outsourcing x6=lean practices and x7=postponement. From the data above x1(strategic supplier partnership), x2(customer relationship), x3(information sharing) and x4(information quality) are statistically significant.

$\beta_1 = 0.745$, shows that one unit change in strategic supplier partnership status results in 0.745 units increase in organizational performance

$\beta_2 = 0.578$, shows that one unit change in customer relationship results in 0.578 units increase in organizational Performance

$\beta_3 = 0.864$, shows that one unit change in information sharing results in 0.864units increase in organizational performance

$\beta_4 = 0.357$, shows that one unit change in information quality results in 0.357units increase in organizational performance

$\beta_5 = 0.478$, shows that one unit change in outsourcing results in 0.478 units increase in organizational performance

$\beta_6 = 0.564$, shows that one unit change in lean practices results in 0.564 units increase in organizational performance

$\beta_7 = 0.467$, shows that one unit change in postponement results in 0.467 units increase in organization performance.

Table 4.3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
dimension01	.804 ^a	.646	.753	.1121

a. Predictors: (Constant), Strategic supplier partnership, Customer relationship, Information sharing, Information quality, Outsourcing, Lean practices, Postponement

b. Dependent Variable: Financial Performance

Source: Research data, 2014

Analysis in table 4.4 shows that the coefficient of determination (the percentage variation in the dependent variable being explained by the changes in the independent variables) R^2 equals 0.646, leaving only 0.354 per cent unexplained. The P- value of 0.000 (Less than 0.05) implies that the model of organizational Performance is significant at the 5 per cent significance. These independent variables are the benefits that accrue as a result of adopting supply chain management practices. It is clear that they contribute to a large extent to the level of performance that is achieved by large manufacturing firms in Kenya. It therefore suffices to conclude that supply chain management practices are essential in enhancing organization performance given that the unexplained variance is 35.4%

Table 4.4 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.352	7	.907	10.283	.007 ^a
	Residual	.137	19	.007		
	Total	9.489	26			

Source: Research data, 2014

For 5% level of significance, the numerator $df = 7$ and denominator $df = 19$, critical F value is 2.482, table 4.5 shows computed F value as 10.283 Hence, the regression model is overall statistically significant, meaning that it is a suitable prediction model for explain supply chain management practices and organization performance.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This study was carried out to establish the effect of supply chain management practices on organizational performance among large manufacturing firms in Kenya. The study had two objectives, to establish the extent to which large manufacturing firms in Kenya have adopted supply chain management practices and to determine the effect of supply chain management practices on the performance of large manufacturing firms in Kenya. This chapter presents the summary of findings for the three objectives mentioned above, the conclusions, recommendations made based on findings and the suggestions on areas that need to be researched as far as this concept is concerned.

5.2 Summary of Findings

The study established that most large manufacturing firms that operate in Kenya have been in existence for more than ten years. The study confirmed that most manufacturing companies in Kenya had adopted the various supply chain management relationship. It was also clear from the study that the seven independent variables; strategic supplier management, customer relationship, information sharing, information quality, outsourcing, lean practices and postponement positively impact organization performance; However, customer relationship and strategic supplier management had the greatest impact. Through the analysis of the relationship between supply chain management practices and organization performance, it was demonstrated that the practices may directly impact organization performance. The findings of this research thus point the importance of supply chain management to organizations.

5.3 Conclusions

The study concludes that most large manufacturing companies in Kenya have adopted the various supply chain management practices. The practices have assisted the large manufacturing companies to enhance the performance of their organizations. This is supported by the results from a regression analysis conducted that indicated that there is a

strong relationship between supply chain management practices and organizational performance. The study has confirmed that strategic supply chain management practices are very significant in enhancing the performance of organizations and as we know today`s competition is moving from among organizations to between supply chains. More and more organizations are adopting SCM in the hope of reducing supply chain costs and securing competitive advantage.

5.4 Recommendations

The study has confirmed that supply chain management practices are very significant in enhancing organization performance. All manufacturing companies and other organizations should be advised to embrace the concept so that they can be able to reap the benefits of adopting these practices. Organization are also advised to adopt the practices that are currently adopted at a very small extent because they can significantly improve organization performance from the current position. They include practices like outsourcing, lean practices and postponement which have proven to have tremendous results in other organizations like Toyota for example.

5.5 Limitations of the Study

The findings of this study and application therefore are limited to large manufacturing companies in Kenya. They may not be applicable directly to other organizations operating outside the Kenyan manufacturing industry. It is therefore important to note that they can only be used for comparative purposes and not any direct application in another industry or country.

The research only focused on the large manufacturing firms in Nairobi. It did not feature the large manufacturing firms in other parts of the country. This was because of limited time and resources. It was such an uphill task for the researcher to convince the respondents to participate in the study. Manufacturing companies are very busy organizations were by getting a respondent was challenging. Most of the respondents

agreed to participate on condition that the information will not be divulged to any other party other than for academic purposes only

5.6 Suggestions for future research

As the concept of SCM practices is complex and involves a network of companies in the effort of producing and delivering a final product, its domain cannot be covered in just one study. Future research can expand on the domain of SCM practices by considering additional dimensions such as geographical proximity, cross functional coordination, logistics integration and agreed supply chain leadership which have been ignored in this study.

Future research should also seek to utilize multiple respondents for each participating to enhance research findings.

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APPENDICES

Appendix 1: Introduction Letter



UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS
MBA PROGRAMME

Telephone: 020-2059162
Telegrams: "Varsity", Nairobi
Telex: 22095 Varsity

P.O. Box 30197
Nairobi, Kenya

DATE 29/09/2014

TO WHOM IT MAY CONCERN

The bearer of this letter HILDA - C. MWALE

Registration No. D61/80976/2012

is a bona fide continuing student in the Master of Business Administration (MBA) degree program in this University.

He/she is required to submit as part of his/her coursework assessment a research project report on a management problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate your assistance to enable him/her collect data in your organization.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organizations on request.

Thank you.



PATRICK NYABUTO
MBA ADMINISTRATOR
SCHOOL OF BUSINESS

Appendix II: Research Questionnaire

SECTION A

This questionnaire has been designed for the sole purpose of collecting data on the effect Of supply chain management practices on organizational performance. The data collected will be treated with a very high degree of confidentiality and it is meant for academic purpose only.

You are kindly asked to fill out this questionnaire by putting an “X” in front of the applicable answer or in the applicable cell.

(Optional)

Name.....

Company.....

Section A: General Information

1. Duration company has been in operation

1. Less than 5 years
2. 5-10 years
3. 11-15 years
4. Above15 years

2. What is your position in this organization?

a) Supply chain manager

b) Assistant supply chain manager

c) Supply chain officer

d) Finance manager

e)I T manager

SECTION B

Objective one. Determining supply chain practices adopted.

With regard to supply chain management practices please tick the box that accurately reflects your present your firm`s present conditions.

1=not at all 2=to a small extent 3= to a moderate extent 4=to a large extent 5=to a very large extent

Strategic supplier partnership	1	2	3	4	5
We consider quality as our number one criterion in selection of suppliers					
We regularly solve problems jointly with our suppliers					
We have helped our suppliers to improve their product quality					
We have continuous improvement programs that include our key suppliers					
We include our key suppliers in our planning and goal setting activities					
We actively involve our key suppliers in new product development processes					

Customer relationship	1	2	3	4	5
We frequently interact with customers to set reliability responsiveness, and other standards for us					
We frequently measure and evaluate customer satisfaction					
We frequently determine future customer expectations					
We facilitate customer`s ability to seek assistance from us.					
We periodically evaluate the importance of our relationship with our customers					
Level of information sharing	1	2	3	4	5
We inform supply chain partners in advance of changing needs					
Our supply chain partners share proprietary information with us.					

Our supply Chain partners keep us fully informed about issues that affect our business					
Our supply chain partners share business knowledge of core business with us					
We and our supply chain partners exchange information that help establishment of business planning					
We and our supply chain partners keep each other informed about events or changes that may affect the other partners					

Level of information quality	1	2	3	4	5
Information exchange between our supply chain partners and us is timely					
Information exchange between our supply chain partners and us is accurate					
Information exchanged between us and our supply chain partners is complete					
Information exchanged between us and our supply chain partners is adequate					
Information exchanged between us and our supply chain partners is reliable					

Extent of outsourcing	1	2	3	4	5
Our firm outsources information systems					
Our firm outsources manufacturing					
Our firm outsources logistics(this includes transportation ,distribution and warehousing)					
Our firm outsources pre-sales customer care					
Our firm outsources after-sales support					
Our firm outsources product design					

Lean practices	1	2	3	4	5
The firm continually improve their own performance with small incremental lean procurement improvements (Kaizen)					
Firm does not rely on inspecting products procured(six sigma)					
Firm buys products in smaller batches only when they are needed at the place where they are needed and exactly in the quantity required (Just in Time)					
Firm practices delayering, Downsizing and Outsourcing (Lean Thinking)					

Postponement	1	2	3	4	5
We delay final product assembly activities until customer orders have actually been received					
We delay final product assembly activities until the last possible position in the supply chain					
Our products are designed for modular assembly					

SECTION C

To establish the relationship between supply chain management practices and organization performance.

Please tick the number which best indicate whether the various supply chain management practices adopted by your firms impact the various aspects of organizations performance.

Organization performance: how well an organization achieves its market oriented goals as well as its financial goals	1	2	3	4	5
Increase in market share					

Return on investment					
The growth of market share					
The growth of sales					
Growth in return on investment					
Profit margin on sales					
Improved product/service quality					
Product innovation					
Short time to market					

Appendix III: Large Scale Manufacturing Firms in Nairobi, Kenya

Sector: Building, Construction and Mining (6)	
Central Glass Industries Ltd	Kenya Builders & Concrete Ltd
Karsan Murji & Company Limited	Manson Hart Kenya Ltd
Kenbro Industries Ltd	Mombasa Cement Ltd
Sector: Food, Beverages and Tobacco (100)	
Africa Spirits Ltd	Highlands Mineral Water Co. Ltd
Agriner Agricultural Development Limited	Homeoil
Belfast Millers Ltd	Insta Products (EPZ) Ltd
Bidco Oil Refineries Ltd	Jambo Biscuits (K) Ltd
Bio Foods Products Limited	Jetlak Foods Ltd
Breakfast Cereal Company(K) Ltd	Karirana Estate Ltd
British American Tobacco Kenya Ltd	Kenafric Industries Limited
Broadway Bakery Ltd	Kenblest Limited
C. Czarnikow Sugar (EA) Ltd	Kenya Breweries Ltd
Cadbury Kenya Ltd	Kenya Nut Company Ltd
Centrofood Industries Ltd	Kenya Sweets Ltd
Coca cola East Africa Ltd	Nestle Kenya Ltd
Confec Industries (E.A) Ltd	Nicola Farms Ltd
Corn Products Kenya Ltd	Palmhouse Dairies Ltd
Crown Foods Ltd	Patco Industries Limited
Cut Tobacco (K) Ltd	Pearl Industries Ltd
Deepa Industries Ltd	Pembe Flour Mills Ltd
Del Monte Kenya Ltd	Premier Flour Mills Ltd
East African Breweries Ltd	Premier Food Industries Limited
East African Sea Food Ltd	Proctor & Allan (E.A.) Ltd
Eastern Produce Kenya Ltd	Promasidor (Kenya) Ltd
Farmers Choice Ltd	Trufoods Ltd
Frigoken Ltd	UDV Kenya Ltd
Giloil Company Limited	Unga Group Ltd
Glacier Products Ltd	Usafi Services Ltd
Global Allied Industries Ltd	Uzuri foods Ltd
Global Beverages Ltd	ValuePak Foods Ltd
Global Fresh Ltd	W.E. Tilley (Muthaiga) Ltd
Gonas Best Ltd	Kevian Kenya Ltd
Hail & Cotton Distillers Ltd	Koba Waters Ltd
Al-Mahra Industries Ltd	Kwality Candies & Sweets Ltd
Alliance One Tobacco Kenya Ltd	Lari Dairies Alliance Ltd
Alpha Fine Foods Ltd	London Distillers (K) Ltd
Alpine Coolers Ltd	Mafuko Industries Ltd
Annum Trading Company Limited	Manji Food Industries Ltd

Aquamist Ltd	Melvin Marsh International
Brookside Dairy Ltd	Kenya Tea Development Agency
Candy Kenya Ltd	Mini Bakeries (Nbi) Ltd
Capwell Industries Ltd	Miritini Kenya Ltd
Carlton Products (EA) Ltd	Mount Kenya Bottlers Ltd
Chirag Kenya Limited	Nairobi Bottlers Ltd
E & A Industries Ltd	Nairobi Flour Mills Ltd
Kakuzi Ltd	NAS Airport Services Ltd
Erdemann Co. (K) Ltd	Rafiki Millers Ltd
Excel Chemical Ltd	Razco Ltd
Kenya Wine Agency Limited	Re-Suns Spices Limited
Highlands Canner Ltd	Smash Industries Ltd
Super Bakery Ltd	Softa Bottling Co. Ltd
Sunny Processor Ltd	Spice World Ltd
Spin Knit Dairy Ltd	Wrigley Company (E.A.) Ltd
Sector: Chemical and Allied (62)	
Anffi Kenya Ltd	Crown Berger Kenya Ltd
Basco Product (K) Ltd	Crown Gases Ltd
Bayer East Africa Ltd	Decase Chemical (Ltd)
Continental Products Ltd	Deluxe Inks Ltd
Cooper K- Brands Ltd	Desbro Kenya Limited
Cooper Kenya Limited	E. Africa Heavy Chemicals (1999) Ltd
Beiersdorf East Africa td	Elex Products Ltd
Blue Ring Products Ltd	European Perfumes & Cosmetics Ltd
BOC Kenya Limited	Galaxy Paints & Coating Co. Ltd
Buyline Industries Limited	Grand Paints Ltd
Carbacid (CO2) Limited	Henkel Kenya Ltd
Chemicals & Solvents E.A. Ltd	Imaging Solutions (K) Ltd
Chemicals and Solvents E.A. Ltd	Interconsumer Products Ltd
Coates Brothers (E.A.) Limited	Odex Chemicals Ltd
Coil Products (K) Limited	Osho Chemicals Industries Ltd
Colgate Palmolive (E.A) Ltd	PolyChem East Africa Ltd
Johnson Diversity East Africa Limited	Procter & Gamble East Africa Ltd
Kel Chemicals Limited	PZ Cussons Ltd
Kemia International Ltd	Royal Trading Co. Ltd
Ken Nat Ink & Chemical Ltd	Reckitt Benckiser (E.A) Ltd
Magadi Soda Company Ltd	Revolution Stores Co. Ltd
Maroo Polymers Ltd	Soilex Chemical Ltd
Match Masters Ltd	Strategic Industries Limited
United Chemical Industries Ltd	Supa Brite Ltd
Oasis Ltd	Unilever Kenya Ltd
Rumorth EA Ltd	Murphy Chemical E.A Ltd
Rumorth East Africa Ltd	Syngenta East Africa Ltd

Sadolin Paints (E.A.) Ltd	Synresins Ltd
Sara Lee Kenya Limited	Tri-Clover Industries (K) Ltd
Saroc Ltd	Twiga Chemical Industries Limited
Super Foam Ltd	Vitafoam Products Limited
Sector: Energy, Electrical and Electronics (42)	
A.I Records (Kenya) Ltd	East African Cables Ltd
Amedo Centre Kenya Ltd	Eveready East Africa Limited
Assa Abloy East Africa Ltd	Frigorex East Africa Ltd
Aucma Digital Technology Africa Ltd	Holman Brothers (E.A.) Ltd
Avery (East Africa) Ltd	IberaAfrica Power (EA) Ltd
Baumann Engineering Limited	International Energy Technik Ltd
Centurion Systems Limited	Kenwest Cables Ltd
Digitech East Africa Limited	Kenwestfal Works Ltd
Manufacturers & Suppliers (K) Ltd	Kenya Power & Lighting Co. Ltd
Marshall Fowler (Engineers) Ltd	Kenya Scale Co. Ltd/ Avery Kenya Ltd
Mecer East Africa Ltd	Kenya Shell Ltd
Metlex Industries Ltd	Libya Oil Kenya Limited
Metsec Ltd	Power Technics Ltd
Modulec Engineering Systems Ltd	Reliable Electricals Engineers Ltd
Mustek East Africa	Sanyo Armo (Kenya) Ltd
Nationwide Electrical Industries	Socabelec East Africa
Nationwide Electrical Industries Ltd	Sollatek Electronics (Kenya) Limited
Optimum Lubricants Ltd	Specialised Power Systems Ltd
PCTL Automation Ltd	Synergy-Pro
Pentagon Agencies	Tea Vac Machinery Limited
Power Engineering International Ltd	Virtual City Ltd
Sector: Plastics and Rubber (54)	
Betatrad (K) Ltd	ACME Containers Ltd
Blowplast Ltd	Afro Plastics (K) Ltd
Bobmil Industries Ltd	Alankar Industries Ltd
Complast Industries Limited	Dune Packaging Ltd
Kenpoly Manufacturers Ltd	Elgitread (Kenya) Ltd
Kentainers Ltd	Elgon Kenya Ltd
King Plastic Industries Ltd	Eslon Plastics of Kenya Ltd
Kingway Tyres & Automart Ltd	Five Star Industries Ltd
L.G. Harris & Co. Ltd	General Plastics Limited
Laneeb Plastics Industries Ltd	Haco Industries Kenya Ltd
Metro Plastics Kenya Limited	Hi-Plast Ltd
Ombi Rubber Rollers Ltd	Jamlam Industries Ltd
Packaging Industries Ltd	Kamba Manufacturing (1986) Ltd
Plastics & Rubber Industries Ltd	Keci Rubber Industries
Polyblend Limited	Nairobi Plastics Industries

Polyflex Industries Ltd	Nav Plastics Limited
Polythene Industries Ltd	Ombi Rubber
Premier Industries Ltd	Packaging Masters Limited
Prestige Packaging Ltd	Plastic Electricons
Prosel Ltd	Raffia Bags (K) Ltd
Qplast Industries	Rubber Products Ltd
Sumaria Industries Ltd	Safepak Limited
Super Manufacturers Ltd	Sameer Africa Ltd
Techpak Industries Ltd	Sanpac Africa Ltd
Treadsetters Tyres Ltd	Silpack Industries Limited
Uni-Plasteis Ltd	Solvochem East Africa Ltd
Wonderpac Industries Ltd	Springbox Kenya Ltd
Sector: Textile and Apparels (38)	
Africa Apparels EPZ Ltd	MRC Nairobi (EPZ) Ltd
Fulchand Manek & Bros Ltd	Ngecha Industries Ltd
Image Apparels Ltd	Premier Knitwear Ltd
Alltex EPZ Ltd	Protex Kenya (EPZ) Ltd
Alpha Knits Limited	Riziki Manufacturers Ltd
Apex Appaels (EPZ) Ltd	Rolex Garments EPZ Ltd
Baraka Apparels (EPZ) Ltd	Silver Star Manufacturers Ltd
Bhupco Textile Mills Limited	Spinners & Spinners Ltd
Blue Plus Limited	Storm Apparel Manufacturers Co. Ltd
Bogani Industries Ltd	Straightline Enterprises Ltd
Brother Shirts Factory Ltd	Sunflag Textile & Knitwear Mills Ltd
Embalishments Ltd	Tarpo Industries Limited
J.A.R Kenya (EPZ) Ltd	Teita Estate Ltd
Kenya Trading EPZ Ltd	Thika Cloth Mills Ltd
Kikoy Co. Ltd	United Aryan (EPZ) Ltd
Le-Stud Limited	Upan Wasana (EPZ) Ltd
Metro Impex Ltd	Vaja Manufacturers Limited
Midco Textiles (EA) Ltd	Yoochan Kenya EPZ Company Ltd
Mirage Fashionwear EPZ Ltd	YU-UN Kenya EPZ Company Ltd
Sector: Timber, Wood Products and Furniture (22)	
Economic Housing Group Ltd	Rosewood Office Systems Ltd
Eldema (Kenya) Limited	Shah Timber Mart Ltd
Fine Wood Works Ltd	Shamco Industries Ltd
Furniture International Limited	Slumberland Kenya Limited
Hwan Sung Industries (K) Ltd	Timsales Ltd
Kenya Wood Ltd	Wood Makers Kenya Ltd
Newline Ltd	Woodtex Kenya Ltd
PG Bison Ltd	United Bags Manufacturers Ltd
Transpaper Kenya Ltd	Statpack Industries Ltd
Twiga Stationers & Printers Ltd	Taws Limited
Uchumi Quick Suppliers Ltd	Tetra Pak Ltd

Sector: Pharmaceutical and Medical Equipment (20)	
Alpha Medical Manufacturers Ltd	Dawa Limited
Beta Healthcare International Limited	Elys Chemical Industries
Biodeal Laboratories Ltd	Gesto Pharmaceutical Ltd
Bulks Medical Ltd	Glaxo Smithkline Kenya Ltd
Cosmos Limited	KAM Industries Ltd
Laboratory & Allied Limited	KAM Pharmacy Limited
Manhar Brothers (K) Ltd	Pharmaceutical Manufacturing Co.
Madivet Products Ltd	Regals Pharmaceuticals
Novelty Manufacturing Ltd	Universal Corporation Limited
Oss. Chemie (K)	Pharm Access Africa Ltd
Sector: Metal and Allied (38)	
Allied Metal Services Ltd	Booth Extrusions Limited
Alloy Street Castings Ltd	City Engineering Works Ltd
Apex Street Ltd Rolling Mill Division	Crystal Industries Ltd
ASL Ltd	Davis & Shirliff Ltd
ASP Company Ltd	Devki Steel Mills Ltd
East Africa Foundry Works (K) Ltd	East Africa Spectre Limited
Elite Tools Ltd	Kens Metal Industries Ltd
Friendship Container Manufacturers	Khetshi Dharamshi & Co. Ltd
General Aluminum Fabricators Ltd	Nampak Kenya Ltd
Gopitech (Kenya) Ltd	Napro Industries Limited
Heavy Engineering Ltd	Specialized Engineer Co. (EA) Ltd
Insteel Limited	Steel Structures Limited
Metal Crown Limited	Steelmakers Ltd
Morris & Co. Limited	Steelwool (Africa) Ltd
Nails & Steel Products Ltd	Tononoka Steel Ltd
Orbit Engineering Ltd	Welding Alloys Ltd
Rolmil Kenya Ltd	Wire Products Limited
Sandvik Kenya Ltd	Viking Industries Ltd
Sheffield Steel Systems Ltd	Warren Enterprises Ltd
Sector: Leather Products and Footwear (8)	
Alpharama Ltd	CP Shoes
Bata Shoe Co. (K) Ltd	Dogbones Ltd
New Market Leather Factory Ltd	East Africa Tanners (K) Ltd
C & P Shoe Industries Ltd	Leather Industries of Kenya Limited
Sector: Motor Vehicle Assembly and Accessories (17)	
Auto Ancillaries Ltd	Kenya Vehicle Manufacturers Limited
Varsani Brakelining Ltd	Labh Singh Harnam Singh Ltd
Bhachu Industries Ltd	Mann Manufacturing Co. Ltd
Chui Auto Spring Industries Ltd	Megh Cushion industries Ltd

Toyota East Africa Ltd	Mutsimoto Motor Company Ltd
Unifilters Kenya Ltd	Pipe Manufacturers Ltd
General Motor East Africa Limited	Sohansons Ltd
Impala Glass Industries Ltd	Theevan Enterprises Ltd
Kenya Grange Vehicle Industries Ltd	
Sector: Paper and Paperboard (48)	
Ajit Clothing Factory Ltd	Conventual Franciscan Friars-Kolbe Press
Associated Papers & Stationery Ltd	Creative Print House
Autolitho Ltd	D.L. Patel Press (Kenya) Limited
Bag and Envelope Converters Ltd	Dodhia Packaging Limited
Bags & Balers Manufacturers (K) Ltd	East Africa Packaging Industries Ltd
Brand Printers	Elite Offset Ltd
Business Forms & Systems Ltd	Ellams Products Ltd
Carton Manufacturers Ltd	English Press Limited
Cempack Ltd	General Printers Limited
Chandaria Industries Limited	Graphics & Allied Ltd
Colour Labels Ltd	Guaca Stationers Ltd
Colour Packaging Ltd	Icons Printers Ltd
Colour Print Ltd	Interlabels Africa Ltd
Kenya Stationers Ltd	Jomo Kenyatta Foundation
Kim-Fay East Africa Ltd	Kartasi Industries Ltd
Paper Converters (Kenya) Ltd	Kenafric Diaries Manufacturers Ltd
Paper House of Kenya Ltd	Kitabu Industries Ltd
Paperbags Limited	Kul Graphics Ltd
Primex Printers Ltd	Label Converters
Print Exchange Ltd	Modern Lithographic (K) Ltd
Printpak Multi Packaging Ltd	Pan African Paper Mills (EA) Limited
Printwell Industries Ltd	Ramco Printing Works Ltd
Prudential Printers Ltd	Regal Press Kenya Ltd
Punchlines Ltd	SIG Combibloc Obeikan Kenya

Source: Kenya Association of Manufactures Directory (KAM) 2013